IN THE CLAIMS:

Please amend Claims 1-11, 13, 26-28 and 30 as follows.

1. (Currently Amended) A 3D image ~~reproduction~~ data generator that generates 3D image ~~reproduction~~ data for a 3D display apparatus that emits a plurality of rays to form ~~forms~~ intersections of ~~a~~ the plurality of rays in ~~the~~ air, wherein the plurality of rays from the intersections ~~of rays are~~ enter into an eye of an observer to be viewed as light flux, such that the observer recognize~~sd as~~ the intersections as point images, a large collection of which forms a 3D image ~~by an observer~~,

wherein said data generator generates 3D image ~~reproduction~~ data ~~for reproduction of said 3D image~~ by using a plurality of parallax images.

2. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 1, wherein said plurality of parallax images are images acquired at a plurality of viewing points of an imaging system, and their pixel count and alignment match the number and alignment of ray sources.

3. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 2, wherein when obtaining said plurality of parallax images, only an effective area for generating said 3D image reproduction data is clipped by trimming.

4. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 3, wherein after said trimming, the trimmed image is further shrunk or stretched.

5. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 2, wherein when obtaining said plurality of parallax images, to limit an effective area for generating 3D image reproduction data, an area board which indicates said effective area is imaged together with the object.

6. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 5, wherein said area board is set up virtually in a virtual space constructed on a computer and is not taken into the parallax image data acquired.

7. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 2, wherein when obtaining said plurality of parallax images, the locations of the viewing points move in the imaging system such that the optical axis of the imaging system will move in parallel.

8. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 5, wherein when obtaining said plurality of parallax images, the locations of the viewing points move in the imaging system such that the optical axis of the imaging system will always pass through the center of said effective area.

9. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 1, wherein said 3D image reproduction data is a group of rays emitted from the ray sources and sampled on a plane that is located near the observer and intersects with the group of rays, said data having pixel count and alignment that match the number of viewing points and alignment of said ray sources needed to obtain said parallax images.

10. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 9, wherein said 3D image reproduction data is generated from said plurality of parallax images, with pixels from the same location in each of the parallax images arranged according to the alignment of the parallax images.

11. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 1, wherein said 3D image reproduction data is represented as parallax image arrays Q (i, j) of w2 pixels wide × h2 pixels high parallax images, w2 and h2 coincide with the horizontal resolution and vertical resolution, respectively, of the viewing

points for obtaining said parallax image data, and (i, j) corresponds to the locations of the ray sources capable of generating said 3D image reproduction data,

said parallax image data is represented as image arrays P (x, y) of w1 wide × h1 pixels high image, w1 and h1 coincide with the horizontal resolution and vertical resolution, respectively, of said sources, and (x, y) corresponds to the locations of the viewing points for obtaining said parallax image, and

any given element image Q (m, n) of said image arrays Q (i, j) is formed by mapping the pixel information at the location (m, n) in said image arrays P (x, y) for all the values of x and y to the pixel information at the location (m, n) of the image Q (m, n).

12. (Cancelled)

13. (Currently Amended) A 3D image ~~reproduction~~ generating method that generates 3D image ~~reproduction~~ data for a 3D display apparatus that emits a plurality of rays to form ~~forms~~ intersections of ~~a~~ the plurality of rays in ~~the~~ air, wherein the plurality of rays from the intersections enter into an eye of an observer to be viewed as light flux, such that ~~said~~ the observer recognizes the intersections as point images, a large collection of which forms ~~of rays are recognized as~~ a 3D image ~~by an observer~~,

wherein said generating method generates 3D image ~~reproduction~~ data ~~for reproduction of said 3D image~~ by using a plurality of parallax images.

14-24. (Cancelled)

25. (Original) A computer-readable storage medium that stores program code created in accordance with the method recited in claim 13.

26. (Currently Amended) The 3D image ~~reproduction~~ data generator according to claim 1, wherein said 3D display apparatus causes the observer to recognize the 3D image of the object by irradiating a plurality of rays through the intersection formed by themselves into the observer's one eye.

27. (Currently Amended) The 3D image ~~reproduction~~ generating method according to claim 13, wherein said 3D display apparatus causes the observer to recognize the 3D image of the object by irradiating a plurality of rays through the intersection formed by themselves into the observer's one eye.

28. (Currently Amended) A 3D display apparatus that forms intersections of a plurality of rays in ~~the~~ air to generate a 3D image of an object, comprising:

a display panel with a plurality of light sources for emitting a plurality of rays; and

a controller for controlling said display panel to emit rays from the light sources to a direction of viewing points where parallax images are obtained,

wherein said controller controls either colors or intensities of rays based on the plurality of parallax images which contain the object image, ~~and said~~ the plurality of rays from the plurality of light sources form intersections in air, and the plurality of rays from the intersections ~~of the plurality of rays are~~ enter into an eye of an observer to be viewed as light flux, such that the observer recognizes the intersections as point images, a large collection of which forms ~~recognized as~~ a 3D image ~~by an observer~~.

29. (Previously Presented) The apparatus according to claim 28, wherein said controller associates each light source with a coordinate of each pixel on the parallax images according to coordinates of the viewpoints where the parallax images are obtained, and coordinates of the light sources and colors and intensities of rays emitted from the light sources to the viewpoints are based on the colors and brightness of corresponding pixels.

30. (Currently Amended) A method for controlling a display panel comprising a plurality of light sources for emitting a plurality of rays, said method comprising:

inputting parallax images of an object obtained at viewpoints of an imaging system;

associating coordinates of the light sources with coordinates of pixels in the parallax images according to coordinates of the viewpoints and the coordinates of the light sources;

determining a color and intensity of a ray emitted from each light source to the direction of the viewpoints based on a color and intensity of each corresponding pixel; and

emitting a ray of the determined color and intensity from each light source to the direction of the viewpoints,

wherein said display panel is a panel that is used for a 3D display apparatus which ~~generates~~ emits a plurality of rays to form intersections of the plurality of rays in air, wherein ~~with said~~ the plurality of rays from the intersections enter into an eye of an observer to be viewed as light flux, such that ~~and causes an~~ the observer ~~to~~ recognizes ~~said plurality of~~ the intersections as point images, a large collection of which forms ~~rays as~~ a 3D image.